PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVLOVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL OF US 29 (GEORGIA AVE) AT WAYNE AVENUE. THE INTERSECTION WILL BE UPGRADED TO APS/CPS AND ALL HANDICAP RAMPS WILL BE RECONSTRUCTED TO ADA STANDARDS. INTERSECTION LIGHTING WILL ALSO BE ADDED. US 29 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA EIGHT PHASE, SEMI ACTUATED MODE. THERE ARE EXCLUSIVE/PERMISSIVE LEFT TURN PHASES FOR WAYNE AVENUE WITH THE THROUGH MOVEMENTS OPERATING CONCURRENTLY. US 29 OPERATES CONCURRENTLY WITH EXCLUSIVE LEAD/LAG LEFT TURNS. THERE ARE CONCURRENT PEDESTRIAN PHASES FOR THE EAST AND WEST LEGS AND ALTERNATE PEDESTRIAN PHASES FOR THE NORTH AND SOUTH LEGS OF THE INTERSECTION.

III. SPECIAL NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF ALL WORK. THE APS PUSHBUTTONS SHALL BE DELIVERED TO MR. KEITH LORD (301) 674-8965 AT THE MONTGOMERY COUNTY TECHNICAL CENTER, SIX(6) WEEKS PRIOR TO INSTALLATION.

IV. INTERCONNECT:

THIS INTERSECTION WILL BE INTERCONNECTED TO THE ADJACENT INTERSECTIONS NORTH AND SOUTH ALONG US 29. SEE INTERCONNECT PLANS FOR DETAILS. THIS INTERSECTION WILL ALSO BE INTERCONNECTED TO THE INTERSECTION TO THE WEST AT RAMSEY AVE.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE STATE HIGHWAY ADMINISTRATION

CAT. CODE	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, NEMA SIZE 6 AND CONTROLLER ASC II WITH VIDEO DETECTION INTERFACE EQUIPMENT (MONTGOMERY COUNTY)
900000	138	SF	SHEET ALUMINUMN SIGN
	8	EA	D-3(1) (VAR. X 16") MAST ARM MOUNTED
	4	EA	R4-7(1) (24" X 30") GROUND MOUNTED
	4	EA	R10-11B (30" X 30") MAST ARM MOUNTED
	8	EA	R10-3(1) (9" X 15") GROUND MOUNTED

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

CAT. CODE	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC
201032	1	CY	CLASS 2 EXCAVATION
203030	5	CY	TEST PIT EXCAVATION
504322	7	SY	HMA SUPPAV 19.0mm FDP PG 64-22 LEV 4
585621	797	LF	12" WHITE PREF THERMO PAV'T MARKING LINES
585625	187	LF	24" WHITE PREF THERMO PAV'T MARKING LINES
585700	2257	LF	REM EXIST PAVM'T MARKING LINES, ANY WIDTH
600000	330	SF	REMOVE AND RESET DECORATIVE BRICK
634300	216	LF	STD TYPE A COMB CURB AND GUTTER 12" X 8"
655105	700	SF	5 INCH CONCRETE SIDEWALK
655120	110	SF	DETECTABLE WARNING SURFACES
713010	1	LS	SELECTIVE TREE FELLING
800000	1	EA	FURNISH AND INSTALL 2 WIRE CENTRAL CONTROL UNIT
800000	8	EA	FURNISH AND INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	8	EA	FURNISH AND INSTALL LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	5	EA	FURNISH AND INSTALL 10' PEDESTAL POLE w/BREAKAWAY COUPLINGS (TIGER DRYLACK GREEN RAL 6009)
800000	4	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 50' MAST ARM (TIGER DRYLACK GREEN RAL 6009)
800000	2	EA	FURNISH AND INSTALL 15 FOOT LIGHTING ARM FOR SIGNAL STRUCTURE (TIGER DRYLACK GREEN RAL 6009)
800000	275	LF	DISCONNECT , PULL-BACK & REROUTE CABLES
800000	50	EA	12 INCH (R, Y, G) LED SIGNAL HEAD SECTION
800000	138	SF	INSTALL SHEET ALUMINUMN SIGN OVERHEAD OR GROUND MOUNT
800000	4	EA	VIDEO DETECTION CAMERA AND CABLE
801130	4	EA	SQ PERF TUB ST SIGN POSTS
801135	4	EA	SQ TUB STEEL ANCHOR BASES
805135	176	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	177	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805155	515	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
807405	1	EA	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLT 100 AMP
810022	50	LF	ELECTRICAL CABLE - 1 CONDUCTOR NO.8 AWG-THHN/THWN
811001	8	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
816010	4	EA	CONT CAB 500' VID DET CAMERA CNTRLLR
816110	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
831010	2	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE (TIGER DRYLACK GREEN RAL 6009)
832020	620	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861105	1465	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1634	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	2396	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	459	LF	ELECTRICAL CABLE - 2 CONDUCTOR (TC, NO. 12 AWG)

C. EQUIPMENT TO BE RETURNED TO MR. KEITH LORD (Phone: 301-279-1291)
AT MONTGOMERY COUNTY SIGNAL SHOP
ADDRESS- 1283, BUILDING C, SEVEN LOCKS ROAD, ROCKVILLE , MARYLAND 20854

QUANTITY	UNIT	DESCRIPTION
1	EA	BASE CABINET SIZE 6
4	EA	VIDEO DETECTION CAMERA

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. Jeffery Wentz
Assistant District Engineer - Traffic
Phone: (301 513-7358

Mr. Vernon Stinett
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
Utility Engineer
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: 410-787-7650

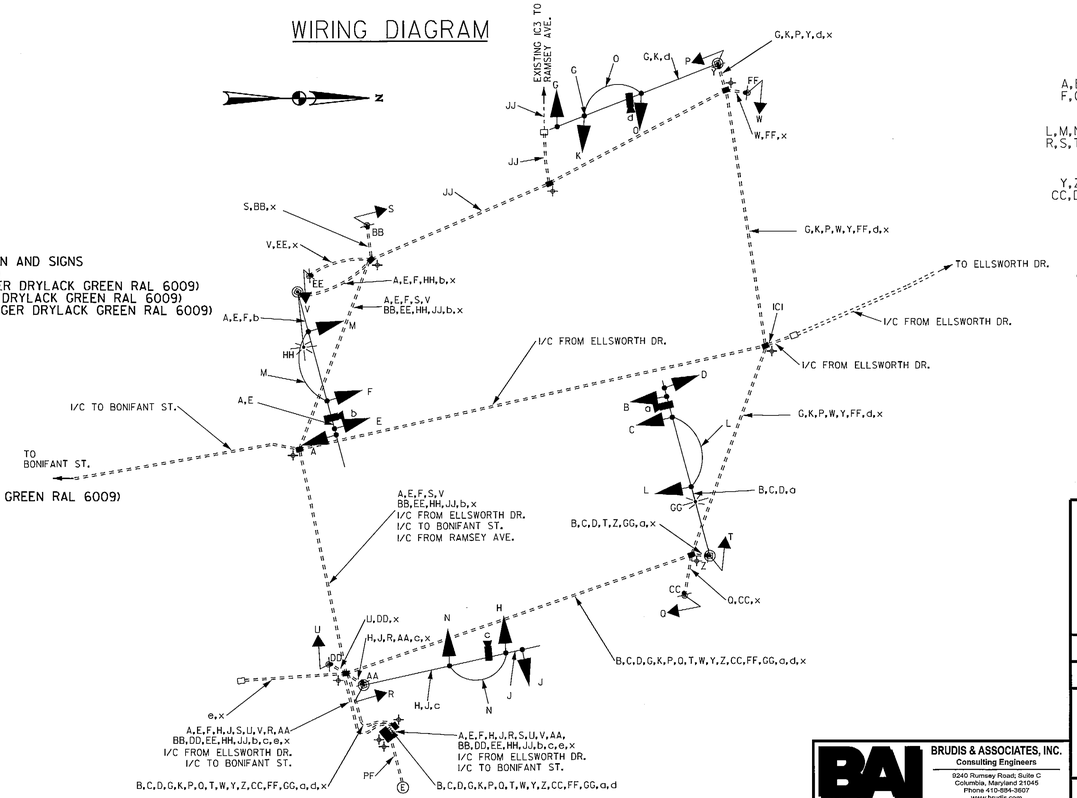
Mr. Kamal Hamud
Montgomery County
Phone: 240-777-8761

Mr. Sonny Bailey
Manager, Sign Operations
Phone: 410-787-7670

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	←R	←R	R	R	←R	←R	R	R	R	R	R	R	R	R								
	←Y	←Y	Y	Y	←Y	←Y	Y	Y	←Y	←Y	Y	←Y	←Y	Y								
	←G	←G	G	G	←G	←G	G	G	←G	←G	G	←G	←G	G								
PHASE 1 AND 5	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 1 AND 5 CHANGE	←Y–	←Y–	G	G	←R–	←R–	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 2 AND 5 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6 CHANGE	←R–	←R–	R	R	←Y–	←Y–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 AND 7	←R–	←R–	R	R	←R–	←R–	R	R	←G/R	←G/R	R	←G/R	←G/R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																						
PHASE 3 AND 8	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	←Y/G	←Y/G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	←R–	←R–	R	R	←R–	←R–	R	R	←G/G	←G/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 7 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	←Y/G	←Y/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E F,G,H,J,K	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
L,M,N,O,P,Q R,S,T,U,V,W	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Y,Z,AA,BB CC,DD,EE,FF	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
GG,HH	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
a,b,c,d,e	VIDEO DETECTION CABLE
x	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
I/C	12 PAIR INTERCONNECT CABLE
JJ	EX. INTERCONNECT CABLE TO BE RE-ROUTED FROM EX. CABINET TO PROP. CABINET
PF	POWER FEED UNDERGROUND
+	GROUND ROD

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 29 (GEORGIA AVE) AT WAYNE AVE
TRAFFIC SIGNAL DESIGN
SILVER SPRING, MD

GENERAL INFORMATION PLAN SHEET

SCALE NTS DATE 07/2009 CONTRACT NO. MO2165168

DESIGNED BY MS COUNTY MONTGOMERY
DRAWN BY MS LOGMILE 15002900.67
CHECKED BY JB TIMS NO. J721
F.A.P. NO. TOD NO.

TS NO. 4195D GI | DRAWING 3 OF 3 | SHEET NO. 4 OF 26

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